HD-XSPA

4K Ultra High-Definition 7.1 Surround Sound AV Receiver

- *True 7.1 surround sound processing for any room of the house*
- *DTS-HD Master Audio™, Dolby® TrueHD, and Dolby Digital® Plus decoding*
- *Built-in high-efficiency, high-performance 8-channel power amplifier*
- *140 Watts/Ch. @ 8 Ohms, 240 Watts/Ch. @ 4 Ohms*
- *Support for both active powered subwoofers and passive in-wall subwoofers*
- *Eleven inputs: four HDMI®, one SPDIF optical, two SPDIF coaxial, two unbalanced stereo, one balanced stereo, and one DM 8G+™*
- *DM 8G+ input enables seamless whole-house AV system integration via Crestron® DigitalMedia™*
- *Enables direct connection to an HDBaseT® source via the DM 8G+ input*
- *HDMI output supports Full HD 1080p, 3D, and 4K video displays*
- *Advanced HDCP management for trouble-free handling of copy-protected digital content*
- *QuickSwitch HD® technology for fast, reliable switching*
- *Unbalanced stereo downmix output for second zone or audio return*
- *Amplified stereo downmix output available in lieu of back speakers*
- *RS-232, IR, Ethernet, relay, and contact sensing ports for control of local devices [1]*
- *CEC pass-through from a control system for device control via HDMI [1]*
- *USB HID mouse/keyboard extension and routing via DigitalMedia*
- *Native Crestron control system integration via 10/100 Ethernet*
- *Color LCD front panel for basic setup and operation*
- *Front panel USB port for installer setup*
- *Simplified setup via front panel or software*
- *Built-in noise generator for audio setup*
- *DSP with 9-band graphic or parametric EQ, delay, crossover, and compression*
- *Speaker Profiles feature for easy, immediate equalization*
- *Configurable speaker protection for maximum headroom*
- *Source input compensation and 80 ms lip sync adjustment per input*
- *Allows any SPDIF or analog audio input to be used with any HDMI video input*
- *Easy speaker wire termination via heavy-duty detachable terminal blocks*
- *Intelligent amplifier protection and remote fault monitoring*
- *70/100 Volt ìconstant-voltageî output options available*
- *Low power consumption, cool-running operation*
- *Compact 2-space rack-mountable design*

The Crestron® HD-XSPA makes it easy to put great surround sound in any room of the house as part of a complete home automation and entertainment system. Engineered with integration in mind, the HD-XSPA delivers pure, impactful power and performance in less space than other alternatives, and includes advanced features for sharing sources between rooms and controlling everything with a choice of touch screens, handheld remotes, and mobile devices. In one compact, 2-space rack-mountable package, the HD-XSPA packs a professional-grade 7.1 surround sound processor, high-efficiency eight-channel power amplifier, ultra high-definition 4K video switcher, 4K DigitalMedia™ receiver, and Crestron control interface.[1]

High-Definition Professional Surround Sound Processor

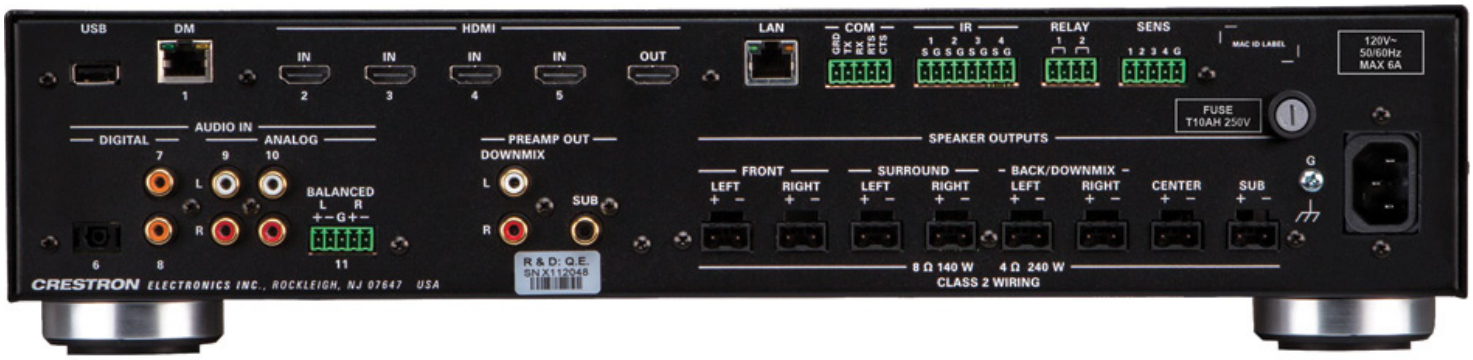
Great surround sound starts with a great processor, and the HD-XSPA employs professional grade decoding and signal processing to support the latest 7.1 digital formats including Dolby® TrueHD, Dolby Digital® Plus, and DTS-HD Master Audio™. Onboard DSP provides the sonic tools needed to maximize the sound quality of each speaker within the room, including a choice of 9-band graphic or parametric EQ, plus trim, delay, crossover, and speaker protection adjustments. Additional controls are provided for main volume, bass, treble, loudness, compression, and LFE. Advanced HDCP management ensures trouble-free handling of copy-protected digital HD content.

High-Powered 7.1 Surround Sound Amplifier

Despite its compact size, the HD-XSPA delivers a generous amount of power from its onboard multichannel power amplifier. Each amp channel is capable of producing a gratifying 140 Watts at 8 Ohms, and 240 Watts at 4 Ohms. Instead of the customary seven amp channels, the HD-XSPA features eight full channels of robust amplification to drive a complete 7.1 speaker system including a passive in-wall subwoofer, minimizing both rack space and floor space requirements. A line-level sub output is also included to support an active powered subwoofer.

The HD-XSPA can be set up to support a wide variety of speaker configurations up to 7.1. When configured for use with a 5.1 or smaller speaker system, two of its amp channels can be reallocated to drive a second stereo zone. See “Downmix Output” below for more information.

HD-XSPA 4K Ultra High-Definition 7.1 Surround Sound AV Receiver



HD-XSPA – Rear View

Complete Connectivity

The HD-XSPA includes full input connectivity for all types of digital and analog sources including Blu-ray Disc® players, HDTV receivers, game consoles, computers, media servers, and mobile devices. Additionally, a DigitalMedia input and stereo downmix output are included to facilitate integration as part of a whole-house AV system.

- **HDMI® Inputs –** HDMI provides the essential interface for handling high-definition 7.1 digital surround sound and 4K video sources. The HD-XSPA includes four HDMI inputs, which can be expanded using a Crestron HD-MD8X1 or HD-MD8X2 switcher[2]. The HD-XSPA also allows for control of the connected sources through their HDMI connections using CEC (Consumer Electronics Control) signals sent from a Crestron control system[1].
- **SPDIF Inputs –** A combination of one optical and two coaxial type inputs provides connectivity for SPDIF digital audio sources. Audio signals can also be received from a Sonnex® Multiroom Audio System via an AUD-EXT Audio Extender[2].
- **Stereo Analog Inputs –** Three stereo audio inputs (2 unbalanced, 1 balanced) are included to handle analog signals from line-level sources. Audio signals can also be received from a Sonnex Multiroom Audio System via an AUD-EXT Audio Extender[2].
- **DigitalMedia 8G+™ Input –** The DM 8G+™ input provides a one-wire connection to a DigitalMedia switcher. The switcher can be located in a central equipment cabinet along with all the shared video sources for the house, allowing any of those sources to be distributed to any room in the house — including rooms equipped with an HD-XSPA. The DM 8G+ input can also be used to connect laptop computers and other portable devices from anywhere in the house using a DM 8G+ transmitter or HDBaseT® transmitter[2]. The transmitter can either be routed through the central DigitalMedia switcher or wired directly to the DM 8G+ input on the HD-XSPA. DM 8G+ technology requires just one CAT5e wire for hookup, supporting Full HD 1080p video and 7.1 audio over wire lengths up to 330 ft (100 m), and 4K video over shorter distances.[3]
- **Downmix Output –** This audio output provides a stereo or mono downmix of the surround sound signal to feed a second listening zone or headphone amp. It can also be used to provide an audio return channel to a Sonnex Multiroom Audio System, allowing the local audio to be distributed to multiple stereo zones throughout the house. The downmix signal is provided through an unbalanced line-level output, which can be extended up to 2000 feet (610 m) over a single CAT5 wire using an AUD-EXT Audio Extender[2]. The downmix output can also be configured as an amplified output to directly drive a pair of speakers. (When the amplified downmix option is enabled, the surround sound speaker system is limited to 5.1.) The downmix output includes dedicated controls for volume, bass, treble, loudness, balance, and delay, which can be made accessible from any touch screen, keypad, or remote in the house.[1]
- **Subwoofer Line Output –** In addition to the amplified subwoofer output, the sub signal is also provided as a line-level output to feed a powered subwoofer or external amplifier.
- **HDMI Output –** The HDMI output normally connects to the local video display or projector. The HDMI output passes Full HD 1080p, Ultra HD, 2K, and 4K video with HDCP, Deep Color, and 3D from any of the four HDMI inputs and the DM 8G+ input. It also passes audio, with the ability to select a straight pass-through from the selected HDMI or DM 8G+ source, or a stereo downmix of the decoded surround sound signal of any source. It can even pass CEC signals from a control system to control the display device. As an option, the HDMI output can be connected to a DM-TX-201-C DM 8G+ Transmitter[2] to provide an AV return channel to a centralized DigitalMedia system, allowing local sources to be shared with other rooms in the house.

Each input on the HD-XSPA includes an input compensation adjustment to match the average level between sources, and up to 80 ms of lip-sync delay.

Ultimate Integration

By design, the HD-XSPA works seamlessly as part of a complete Crestron whole-house AV distribution and automation system.

- Audio signals can be routed to and from the HD-XSPA using Crestron AUD-EXT Audio Extenders[2], allowing for integration with a Sonnex Multiroom Audio System.
- DigitalMedia connectivity affords sharing of multichannel audio along with HD video as part of a complete DigitalMedia network.
- Via DigitalMedia or Ethernet, the HD-XSPA can communicate with a Crestron control system, allowing user-friendly operation via a choice of touch screens, handheld remotes, smartphones, and tablet computers.
- Using the hardware provided, the HD-XSPA can be installed in an equipment rack or placed on a shelf.

Keyboard/Mouse Extender

When connected to a DigitalMedia switcher or transmitter, the HD-XSPA can function as a keyboard/mouse extender. Via its rear panel USB port, a USB HID-compliant keyboard and/or mouse can be connected and used to control a computer or media server in the central equipment cabinet (or any other location).

Other types of USB devices, including mobile phones, media players, Web cameras, flash drives, and game controllers, can be supported by adding a USB-EXT-DM-REMOTE extender module[2]. Also, a local host computer, media server, or game console can be controlled from a remote location by adding a USB-EXT-DM-LOCAL extender module[2].

Amplifier Monitoring and Protection

For systems utilizing in-wall or in-ceiling speakers, itís critical that the amplifier driving those speakers possesses the intelligence to protect itself in the event of a shorted or damaged speaker line. The HD-XSPA includes sophisticated protection from many types of faults on a per channel basis. In the event of a fault, the front panel LCD provides clear fault indication to speed the troubleshooting of damaged or incorrect wiring, poor rack ventilation, and other unforeseen issues. Fault alerts may also be broadcast to a touch screen or mobile device, and integrators can even monitor and track the data remotely to ensure a rapid service response.

Speaker Protection

Configurable output limiting assures maximum headroom while preventing damage to the speakers. The limiting threshold is easily set to match the power handling capability of each speaker, achieving a completely transparent effect right up to the speakers' limits without fear of overpowering them.

Speaker Profiles

The Speaker Profiles feature delivers excellent sound quality quickly by allowing installers to save and load EQ and Speaker Protection settings for all of the speakers they sell and install. Tuning a complete surround sound system can be as easy as loading the appropriate Speaker Profile for each speaker. Additional simplified settings are included to compensate for a room's size, materials, and speaker placement. A complete set of profiles is provided for Crestron Essence®, Aspire®, Excite®, and AIR® speakers, allowing any installer to achieve a great sounding system without touching a single EQ setting.

70/100V Option

For ultimate versatility, the HD-XSPA can be equipped for use with 70 or 100 Volt speakers. Also known as "constant-voltage", 70 Volt and 100 Volt speaker systems allow for long wire runs using small-gauge wire, with the potential for connecting numerous speakers per circuit. Typical applications include outdoor speaker zones and commercial environments. Any of the HD-XSPAís amplifier outputs can be converted to 70 or 100 Volt using Sonnex Output Transformers (SAT-70V/100V-2 or SAT-70V/100V-4[2]).

Device Control Ports

The HD-XSPA includes an assortment of built-in control ports to allow for programmable control of the local AV components and other room devices without the need for extra control modules or wiring. Each control port is addressable from a Crestron control system, whether that control system is installed locally or in another room. Ethernet, RS-232, IR, and low-voltage relay ports provide for control of the display device and AV sources, and may also be used to control a motorized screen or lift, window treatments, lighting, and other equipment in the room. Many AV devices can also be controlled directly via the HDMI ports. Four "SENS" inputs are also included to accommodate power sensors, motion detectors, and other contact closure devices.[1]

SPECIFICATIONS

Audio – General

Features: 11 selectable source inputs plus built-in noise generator, 7.1 Dolby Digital®/DTS® surround sound decoder, 7.1 multi-channel signal processing and steering, 9-band graphic or parametric EQ, 80 ms lip-sync delay, 20 ms speaker delay, unprocessed "Direct" mode, stereo or mono downmix output, HDCP management, Crestron QuickSwitch HD® , 8-channel power amplifier, amplifier and speaker protection, speaker profiles

Input Signal Types: DigitalMedia 8G+™, HDBaseT®, HDMI®, DisplayPort Multimode[4], S/PDIF (coaxial and optical), analog 2-channel (unbalanced and balanced)

Output Signal Types: Amplified 7.1 channel, line-level 2-channel downmix and subwoofer, HDMI pass-through or 2-channel downmix

Analog-To-Digital Conversion: 24-bit 96 kHz

Digital-To-Analog Conversion: 24-bit 96 kHz (192 kHz in Direct mode)

Audio Performance – Amplified Outputs

Output Power: 140 Watts per channel at 8 Ohms;
240 Watts per channel at 4 Ohms

Damping Factor: >200 @ 20 Hz

Amplifier Monitoring: Over Current, Over/Under Voltage, Over Temperature, DC Offset, Clipping

Frequency Response: 20 Hz to 20 kHz ±0.5 dB

THD+N @ 8 Ohms: <0.008% digital in;
<0.01% balanced in;
<0.02% unbalanced in (at 1 kHz)

THD+N @ 4 Ohms: <0.02% any input (at 1 kHz)

S/N Ratio: >102 dB digital in;
>100 dB analog in (A-Weighted at full output)

Audio Performance – Downmix Preamp Output

Frequency Response: 20 Hz to 20 kHz ±0.5 dB

THD+N: <0.003% digital in;
<0.005% analog in (at 1 kHz)

S/N Ratio: >106 dB digital in;
>102 dB analog in (A-Weighted at full output)

Audio Settings – Surround Sound

Decoding Modes: None, Stereo, Dolby Pro Logic IIx Movie, Dolby Pro Logic IIx Music, DTS Neo:6 Cinema, DTS Neo:6 Music, Two Channel Steering – Surround, Two Channel Steering – Rear, Multi-Channel

Stereo (Party), Dolby Digital, Dolby Digital EX, Dolby Digital Plus, Dolby® TrueHD, DTS, DTS-ES Matrix, DTS-ES Discrete, DTS 96/24, DTS-HD Master Audio™, PCM Multi-Channel

DTS Neo:6 Music Settings: Center Gain 0.0 to 1.0, Standard or Wide mode

Dolby Pro Logic IIx Music Settings: Dimension ±3, Center Width 0 to 7, Standard or Panorama

Speaker Trim: ±12 dB per output (Front L/R, Surround L/R, Back L/R, Center, Sub)

Speaker Delay: 0.0 to 20.0 ms per output

Crossover Frequency: Large (full range), 40, 50, 60, 70, 80, 90, 100, 120, 150, or 200 Hz per output (excluding sub)

Speaker Protection: Output limiting configurable 5 to 140 Watts @ 8 Ohms, 5 to 240 Watts @ 4 Ohms, per output

Low Frequency Effects (LFE): -10.0 to 0.0 dB

EQ Modes: 9-band graphic (per output) or 9-band parametric (per output)

GEQ Center Frequencies: 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz

GEQ Gain: ±12.0 dB per band

PEQ Center Frequency: 10 to 20,000 Hz per band

PEQ Gain: ±12.0 dB per band

PEQ Bandwidth: 0.1 to 3.5 octaves per band

Main Volume Level: -80 to +20 dB plus mute

Bass Control: ±12.0 dB

Treble Control: ±12.0 dB

Loudness Compensation: on/off

Compression: none, Crestron DRC (Heavy, Medium, Light), Bitstream DRC (Heavy, Medium, Light), Dolby TrueHD Auto

Speaker Profiles: Save and load custom or pre-calibrated profiles comprising EQ and Speaker Protection settings

Audio Settings – Downmix

Downmix Volume Level: -80dB to +20dB plus mute

Bass Control: ±12.0 dB

Treble Control: ±12.0 dB

Loudness Compensation: on/off

Balance: ±50%

Summing: Stereo or mono selectable

Delay: 0.0 to 20.0 ms

Audio Settings – Inputs

Input Compensation: ±10.0 dB per input

Lip-Sync Delay: 0.0 to 80.0 ms per input

Video

Features: HDCP management, resolution management, Crestron QuickSwitch HD

Input Signal Types: HDMI, DisplayPort Multimode[4], HDBaseT, DM 8G+™

Output Signal Types: HDMI

Formats: HDMI, DM™, and HDBaseT w/Deep Color, 3D, & 4K; HDCP content protection support

Input Resolutions, Progressive: 640x480@60Hz, 720x480@60Hz (480p), 720x576@50Hz (576p), 800x600@60Hz, 848x480@60Hz, 852x480@60Hz, 854x480@60Hz, 1024x768@60Hz, 1024x852@60Hz, 1024x1024@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1365x1024@60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@24Hz (1080p24), 1920x1080@25Hz (1080p25), 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz, 2048x1080@24Hz, 2048x1152@60Hz, 2560x1440@60Hz, 2560x1600@60Hz, 3840x2160@24Hz, 3840x2160@25Hz, 3840x2160@30Hz, 3840x2160@50Hz[5], 3840x2160@60Hz[5], 4096x2160@24Hz, 4096x2160@50Hz[5], 4096x2160@60Hz[5], plus any other resolution allowed by HDMI up to 300MHz pixel clock

Input Resolutions, Interlaced: 720x480@30Hz (480i), 720x576@25Hz (576i), 1920x1080@25Hz (1080i25), 1920x1080@30Hz (1080i30), plus any other resolution allowed by HDMI up to 300MHz pixel clock

Output Resolutions: Matched to inputs

DM 8G+ & HDBaseT Maximum Wire Lengths

Cable Type: / Resolution:	DM-CBL-8G DigitalMedia 8G™ Cable	CAT5e (or better) UTP or STP[3]
1080p60 Full HD	330 ft (100 m)	330 ft (100 m)
1920x1200 WUXGA		
1600x1200 UXGA		
2048x1080 2K DCI		
2560x1440 WQHD	230 ft (70 m)	165 ft (50 m)
2560x1600 WQXGA		
3840x2160 4K Ultra HD		
4096x2160 4K DCI		

Communications

Ethernet: For control & setup; 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP

USB: USB client for setup via front panel COMPUTER port; supports extension of USB HID class devices over DM via rear panel USB host port

DigitalMedia: DM 8G+, HDCP management, EDID format management, CEC, PoDM, HDBaseT compliant

HDMI: Passes CEC and EDID, enables CEC pass-through from control system to HDMI inputs and output, supports HDCP, provides HDCP key management

Connectors

USB: (1) USB Type A female; USB 2.0 host port for connection of a mouse/keyboard or other USB HID-compliant device

DM 1: (1) 8-pin RJ45 female, shielded;
DM 8G+ input, HDBaseT compliant;
Connects to the DM 8G+ output of a DM switcher, transmitter, or other DM device, or to a HDBaseT device, via CAT5e or Crestron DM-CBL-8G cable[3]

HDMI IN 2 – 5: (4) 19-pin Type A HDMI female;
HDMI digital audio/video inputs

HDMI OUT: (1) 19-pin Type A HDMI female;
HDMI digital audio/video output

AUDIO IN, DIGITAL 6: (1) JIS F05 female (TOSLINK) optical fiber connector;
S/PDIF optical digital audio input

AUDIO IN, DIGITAL 7 – 8: (2) RCA female;
S/PDIF coaxial digital audio inputs;
Input Impedance: 75 Ohms nominal

AUDIO IN, ANALOG L/R 9 – 10: (4) RCA female comprising (2) unbalanced line-level stereo audio inputs;
Input Impedance: 10k Ohms;
Maximum Input Level: 2 Vrms

AUDIO IN, ANALOG BALANCED L/R 11: (1) 5-pin 3.5mm detachable terminal block;
Balanced/unbalanced line-level stereo audio input;
Input Impedance: 24k Ohms balanced, 12k Ohms unbalanced;
Maximum Input Level: 4 Vrms balanced, 2 Vrms unbalanced

PREAMP OUT, DOWNMIX L/R: (2) RCA female comprising (1) unbalanced line-level stereo audio output;
Output Impedance: 100 Ohms;
Maximum Output Level: 2 Vrms

PREAMP OUT, SUB: (1) RCA female;
Unbalanced line-level subwoofer audio output;
Output Impedance: 100 Ohms;
Maximum Output Level: 6.3 Vrms

SPEAKER OUTPUTS, FRONT LEFT/RIGHT, SURROUND LEFT/RIGHT, BACK/DOWNMIX LEFT/RIGHT, CENTER, SUB: (8) 2-pin 7.62mm 15A detachable terminal blocks;
7.1, or 5.1 + stereo downmix, amplifier outputs;
Wire Size: Terminals accept up to 14 AWG

LAN: (1) 8-wire RJ45 female;
10Base-T/100Base-TX Ethernet port

COM: (1) 5-pin 3.5mm detachable terminal block;
Bidirectional RS-232 port;
Up to 115.2k baud, hardware and software handshaking support

IR 1 – 4: (1) 8-pin 3.5mm detachable terminal block comprising (4) IR/Serial ports;
IR output up to 1.2 MHz;
1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud

RELAY 1 – 2: (1) 4-pin 3.5mm detachable terminal block comprising (2) normally open, isolated relays;
Rated 1 Amp, 30 Volts AC/DC;
MOV arc suppression across contacts

SENS: (1) 5-pin 3.5mm detachable terminal block comprising (4) digital/contact closure sensing inputs;
Input Voltage Range: 0 to 24 Volts DC, referenced to ground;
Logic Threshold: 2.5 Volts DC nominal with 1 Volt hysteresis band;
Input Impedance: 10k Ohms at >5 Volts, 1M Ohms at <5 Volts;
Pull-up Resistor: 2.2k Ohms per input

FUSE (US/North America): Main fuse, T10AH;
(1/4" x 1-1/4", 250V, 10A, time-lag, high-rupture rated)

FUSE (International): Main fuse, T5AH;
(1/4" x 1-1/4", 250V, 5A, time-lag, high-rupture rated)

G: 6-32 screw, chassis ground lug

120V~50/60Hz MAX 6A (US/North America): (1) IEC 60320 C14 main power inlet;
Mates with removable power cord (included)

220-240V~50/60Hz MAX 3A (International): (1) IEC 60320 C14 main power inlet;
Mates with removable power cord (included)

COMPUTER (front): (1) USB Type B female;
USB computer console port (cable included);
For setup only

Display

Display Type: 16-bit TFT active matrix color LCD
Size: 2 inch (50 mm) diagonal
Resolution: 220 x 176 pixels
Functions: Displays audio settings and setup parameters

Controls & Indicators

PWR: (1) green LED, indicates operating power supplied via AC line
VOL ▲,▼: (2) pushbuttons for volume adjustment
MUTE: (1) pushbuttons for audio mute
Navigation Pad: (1) 5-way navigation pad for menu navigation and parameter adjustment
HOME: (1) pushbutton, returns to the home menu
BACK: (1) pushbutton, steps menu back one level
On/Off: (1) Rocker switch, turns unit on and off
DM 1 (rear): (2) LEDs, green LED indicates DM link status, amber LED indicates video and HDCP signal presence
LAN (rear): (1) green and (1) amber LEDs, green indicates Ethernet link status, amber indicates Ethernet activity

Power Requirements

Main Power (US/North America): 6 Amps @ 120 Volts AC, 50/60 Hz
Main Power (International): 3 Amps @ 220-240 Volts AC, 50/60 Hz

Environmental

Temperature: 41° to 104°F (5° to 40°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 300 BTU/Hr (140W@8Ω);
425 BTU/Hr (240W@4Ω)

Enclosure

Chassis: Metal with black finish, vented sides, ultra-quiet variable-speed fan-cooled
Front Panel: Metal with black finish and polycarbonate label overlay

Mounting: Freestanding or 2U 19-inch rack-mountable (includes removable feet and rack ears)

Dimensions

Height: 4.07 in (104 mm);
3.47 in (89 mm) without feet
Width: 19.0 in (483 mm);
17.28 in (439 mm) without rack ears
Depth: 15.78 in (401 mm)

Weight

32 lb (15 kg)

MODELS & ACCESSORIES

Available Models

HD-XSPA: 7.1 High-Definition Surround Sound AV Receiver
HDI-XSPA: 7.1 High-Definition Surround Sound AV Receiver, International Version, 220-240V

Available Accessories

Essence® Series: In-Wall & In-Ceiling Speakers
Aspire® Series: In-Wall & In-Ceiling Speakers
Excite® Series: In-Wall & In-Ceiling Speakers
AIR® Series: Surface Mount & Landscape Speakers
Saros® Series: Commercial Speakers
SAT-70V/100V: Sonnex® Output Transformers
HD-MD8X1: QuickSwitch HD® 8x1 HDMI® Switcher
HD-MD8X2: QuickSwitch HD® 8x2 HDMI® Switcher
HD-SCALER: High-Definition Video Scaler
DM-TX-201-C: DigitalMedia 8G+™ Transmitter 201
DM-TX-401-C: DigitalMedia 8G+™ Transmitter 401
DM-TX-200-C-2G: Wall Plate DigitalMedia 8G+™ Transmitter 200
HD-TX3-C: HDMI® over HDBaseT® Transmitter
HD-EXT3-C: HDMI® over HDBaseT® Extender w/IR & RS-232
DM-CBL-8G-NP: DigitalMedia 8G™ Cable, non-plenum
DM-CBL-8G-P: DigitalMedia 8G™ Cable, plenum
DM-8G-CONN: DigitalMedia 8G™ Cable Connector
DM-8G-CRIMP: Crimping Tool for DM-8G-CONN
DM-8G-CONN-WG: DigitalMedia 8G™ Cable Connector with Wire Guide
DM-8G-CRIMP-WG: Crimping Tool for DM-8G-CONN-WG
AUD-EXT: Audio Extenders
CBL Series: Crestron® Certified Interface Cables
CNSP-XX: Custom Serial Interface Cable
IRP2: IR Emitter Probe w/Terminal Block Connector
USB-EXT-DM-LOCAL: USB Extender Module for Host
USB-EXT-DM-REMOTE: USB Extender Module for Devices

Notes:

1. Full functionality requires a Crestron control system with professional programming performed by an authorized Crestron system programmer, each sold separately.
2. Item(s) sold separately. Please refer to each productís spec sheet for complete specifications, capabilities, and limitations.
3. The maximum cable length for DigitalMedia 8G+™ or HDBaseT® is 330 ft (100 m) for resolutions up to 1600x1200 and 1920x1200 (including 1080p60 and 2K) using DM-CBL-8G DigitalMedia 8G™ cable, DM-CBL DigitalMedia™ Cable, DM-CBL-D DigitalMedia D Cable, or third-party CAT5e (or better) UTP or STP. For higher resolutions (including 4K), the maximum wire length is 230 ft (70 m) using DM-CBL-8G, or 165 ft (50 m) using DM-CBL, DM-CBL-D, or CAT5e. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise which may impact performance at resolutions above 1080p. Refer to the Crestron DigitalMedia Design Guide, Doc. #4546 for complete system design guidelines. DM 8G+ is compatible with HDBaseT Alliance specifications for connecting to HDBaseT compliant equipment. All wire and cables sold separately.
4. HDMI requires an appropriate adapter or interface cable to accommodate a DisplayPort Multimode signal.
5. 4K support at 50/60 Hz with 4:2:0 color sampling will be enabled through a future firmware update.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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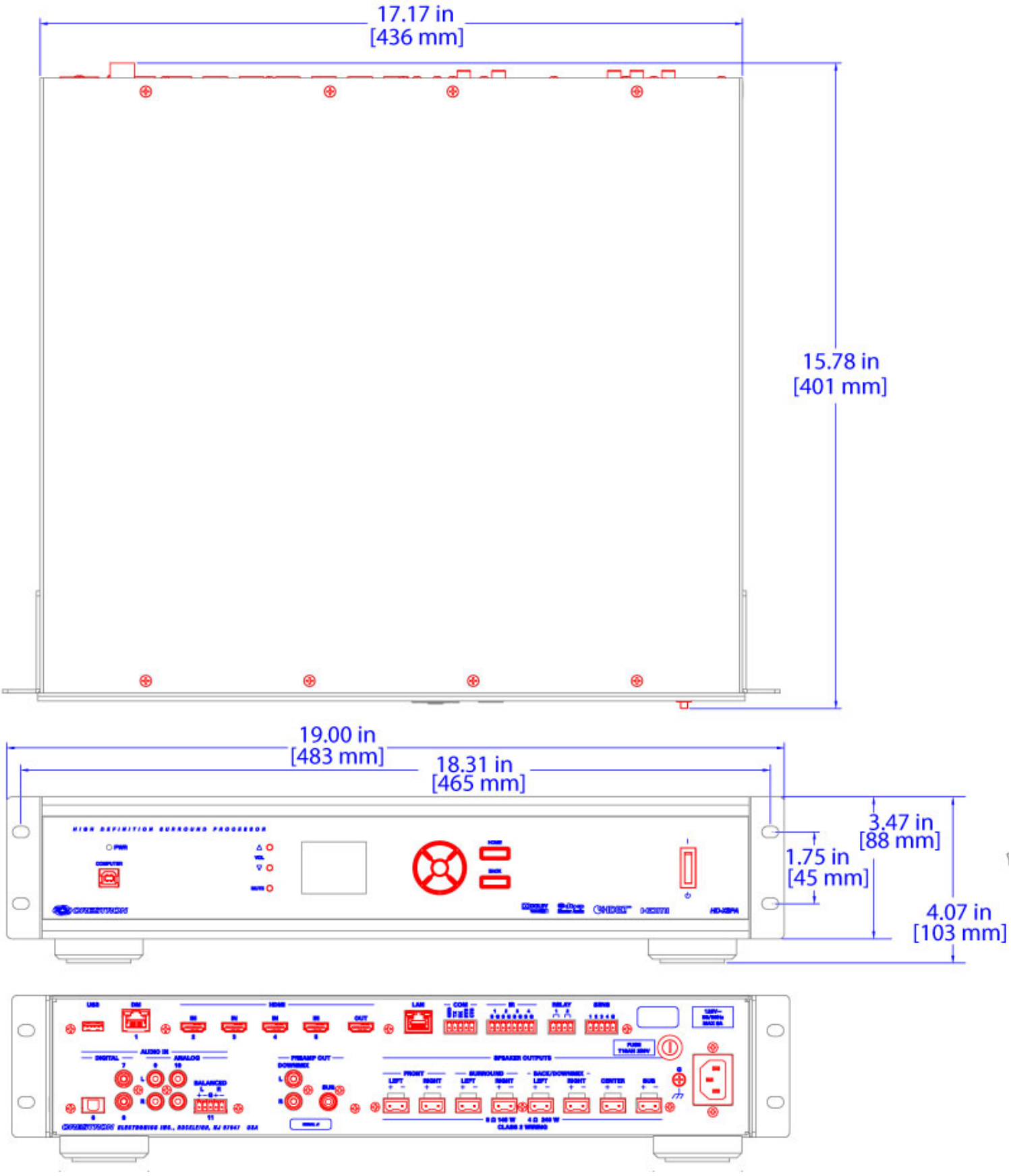
HD-XSPA 4K Ultra High-Definition 7.1 Surround Sound AV Receiver



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